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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,270	07/09/2004	Jean-Pierre Germain	Serie 5831	6035

7590 07/10/2006

Air Liquide
Intellectual Property Department
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Houston, TX 77056

EXAMINER

ALI, MOHAMMAD M

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,270

Applicant(s)

GERMAIN, JEAN-PIERRE

Examiner

Mohammad M. Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-35,37-51,53 and 54 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 52 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-33 and 35, 37-41, 43-51 and 53-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al., (5,036,673). Miller et al., disclose a method and apparatus which may be used to cooling a stream of gaseous fluid (air recirculating by the fan 14) comprising a mixing area/inner cylinder 12 through which the stream passes; at least one impact surface (fan blade 14 on which the air stream impacts as seen by the airflow indicating arrow on the fan 14) located inside the are 12; and a spraying means 17 spraying liquid nitrogen into the are 12; wherein the injection zone has a cross section smaller than that of the portion of the area containing the impact surface and greater than that of the spraying means 17; while spraying through nozzle 17 increases the cross section of the flowing stream (see the flow stream at the nozzle 17); slowing the flow rate of the fluid by increasing the cross section of the stream by a larger cross sectional flow area of the inner cylinder 12 in respect to the annular cross sectional flow area formed by the space between the inner cylinder 12 and the outer drum at the entrance of the recirculated fluid near the bottom of the inner cylinder 12 and the bottom of the drum 2; recovering the cooled fluid by recirculating or getting back fluid in the inner cylinder 12 and applying the recovered fluid to objects (droplets of liquid egg/food stuff) 23 (or see column 5, lines 66-68) for cooling and freezing, the cooled fluid being cooled to between –40 degree C to –160 degree C (see claim 4). See Fig.1, column 4, line 4 to column 5 line 68.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 34 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. Miller et al., disclose the invention substantially as claimed as stated above. However, miller et al., do not disclose chocolate. Miller et al., teach to cool liquid egg droplets (a food stuff similar to the claimed invention to cool chocolate an another food stuff). Therefore, Miller et al., obviously read the claimed invention. Regarding the position of impact surface, it is an obvious design choice to one of ordinary skill in the art to place it at the upstream or down stream end of the mixing pipe.

Allowable Subject Matter

Claim 52 is allowed.

Response to Arguments

Applicant's arguments filed 04/04/06 have been fully considered but they are not persuasive. The Applicant argued, "Miller et al. "673 does not disclose either "slowing the flow of the said fluid by increasing the cross section of the stream" or "recovering the cooled fluid). Ehe Examiner disagrees. While entering the recirculated fluid through the annular space between the drum 2 and the inner cylinder 12 into the inner drum 12 from the bottom side of the drum 2 and the cylinder 12 it through a larger cross sectional area and accordingly flow of fluid slows

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down there. The cold fluid is being recirculated, the Examiner considers this recirculated fluid as recovered fluid as it is the same cold fluid.


Therefore, the rejections are ok. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad M. Ali whose telephone number is (571) 272-4806. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MOHAMMAD M. ALI
PRIMARY EXAMINER